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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,885	09/14/2000	Jukka Jakara	3229-4003	7120

7590 03/19/2003  
Morgan & Finnegan  
345 Park Avenue  
New York, NY 10154

EXAMINER

ALVO, MARC S

ART UNIT	PAPER NUMBER
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1731

20

DATE MAILED: 03/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/581,885

Applicant(s)

JAKARA ET AL.

Examiner

Steve Alvo

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-7 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7 and 9-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2-6-2003 has been entered.

Claims 19, 1, 2, 4-7 and 9-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term post-bleaching step outside the bleach plant" is indefinite the claims include treating the pulp with a peracid bleach solution. Clearly such a step would be a bleaching step and by definition be part of a "bleach plant".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-7 and 9-19 are rejected under 35 U.S.C. 103(a) as obvious over HEBBEL '685 OR '246 in view of WO 97/45586 or WO 94/20674 with or without FOSSUM.

HEBBEL '685 OR '246 teaches bleaching pulp in a 3 and 5-stage bleaching processes (Example VIII) starting with a per-compound, e.g. peracetic acid, and ending with a final (post bleaching) per compound bleaching stage. HEBBEL '685 or '246 further teaches that a magnesium sulphate (alkaline earth compound) can be used as a complex builder or stabilizer. HEBBEL '685 OR '246 further teaches that a peracid could be used as the per compound, e.g.

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peracetic acid. It would have been obvious to use the peracetic acid of HEBBEL '685 OR '246 as the per compound. It would have been obvious to the routineer that after the first 4 stages of HEBBEL '685 OR '246 the brightness would be above 85% ISO and a kappa number less than 4 as HEBBEL '685 OR '246 teaches that after 4 stages the brightness is over 90% MgO (Example VII). See HEBBEL '685, column 2, lines 45-49 for using 0.5 to 10 weight percent per compound. It would have been obvious to bleach the pulp at any point where pulp is normally bleached, e.g. flow pipe, storage tower or on the paper machine. Claim 6 is rejected as it would have been obvious to use other alkaline earth metal salts for the Mg of HEBBEL '685 OR '246, see HEBBEL '685 OR '246, column 3, line 34, for using  $\text{Ca}(\text{OH})_2$  as the complex builder. See HEBBEL '246, column 2, lines 13 and 22, for using peracetic acid as the preferred per compound and bleaching at a peracid pH of 4.5 to 6.5. WO 97/45586 teaches using a pH of 4-8 in a peracid and chelating stage stabilizes the peracid. It would have been obvious to use a pH of 4 to 8 to stabilize the peracid of HEBBEL '685 as taught by WO 97/45586. WO 97/45586 further teaches that the pH after the peracetic acid stage is below 4, e.g. Table 2 shows final pH of 2.2 to 3.5 after the peracetic bleach stage. It would have been obvious to use the conditions of WO 97/45586, Table 2, to obtain low Kappa Numbers from the dissolution of lignin. If necessary, FOSSUM teaches that it is known that per compounds remove lignin; see FOSSUM, column 1, lines 43-45. Obviously the peracid bleaching of HEBBEL '246 or '685 would delignify the pulp and lower the kappa number. Or WO 94/20674 teaches after a peroxide and peracid bleaching stage the kappa number falls below 4. It would have been obvious that the kappa number of the final peracetic acid bleach stage would be below 4 as it would have been lowered to such a value after the previous stages, see WO 94/20674, Tables on page 15.

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HEITTO et al teaches the alternativeness of putting all the process steps of a paper mill in a single plant or multiple plants. It would have been obvious that the post-bleaching stage could be in a separate building than the other bleach steps as taught by HEITTO et al , column 1, lines 15-22. The final bleach stages of HEBBEL '685 OR '246 as HEBBEL '685 OR '246 et al states that the disclosed process is a "complete" bleaching of cellulose, see column 2, lines 9-10 of '685. A complete bleaching process does not require further bleaching. Thus the last per-stage of HEBBEL '685 OR '246 would be a "post-bleach" stage as it comes after the other bleaching stages. . HEBBEL '685 et al teaches that per acids could be used as a substitute for the hydrogen peroxide (column 2, lines 30-43).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over HEBBEL '685 OR '246 in view of WO 97/45586 as applied to claim 1 above, and further in view of FOSSUM et al as applied to claim 1 above.

FOSSUM et al teaches the alternativeness of using alkaline earth sulfates and carbonates as a complex builder (chelating agent) or stabilizer in per acid bleaching. It would have been obvious to substitute the carbonate complex builder of FOSSUM et al for the sulphate complex builder of HEBBEL '685 OR '246 et al as their alternativeness is taught by FOSSUM et al. It would have been obvious to use the calcium salt (calcium carbonate) rather than the magnesium salt (Magnesium carbonate) as they are both alkaline earth metals and would be expected to be chemical equivalents. See HEBBEL "685 OR '246 et al, column 3, line 34, for using calcium salts for the complex builder.

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Any inquiry concerning this communication or earlier communications from the **primary examiner** should be directed to **Steve Alvo** whose telephone number is **(703) 308-2048**. The Examiner can normally be reached on Monday - Friday from **6:00 AM - 2:30 PM (EST)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Steve Griffin, can be reached on 703-308-1164.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Group receptionist** whose telephone number is **703-308-0661**.

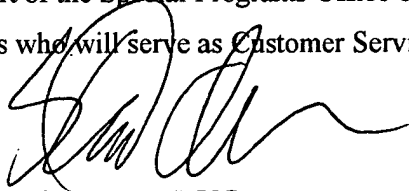
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MSA  
3/14/03



**STEVE ALVO**  
**PRIMARY EXAMINER**  
**ART UNIT 1731**